ORIGINAL RESEARCH PAPER

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KEY WORDS: Primary dysmenorrhoea; *Erandadi kashaya*; udavarta

EFFECT OF ERANDADI KASHAYA IN PRIMARY DYSMENORRHOEA

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ABSTRACT

Dysmenorrhoea is one of the commonest gynaecological conditions that affect the day to day activities of women in their reproductive years. Dysmenorrhoea means cramping pain accompanying menstruation. Primary dysmenorrhoea can be correlated to *udavarta* explained in *vimshati yonirogas*. *Erandadi kashaya* described in *Sahasrayogam is* empirically found to have effects. Here an attempt has been made to study this *kashayayoga* scientifically. The study design is interventional pre and post with a sample size of 30. Patients of age group 15-35 years having history of dysmenorrhoea attending the OPD & IPD of Govt. Ayurveda college hospital for women and children, Poojapura, Thiruvananthapuram were admitted to the study. Ultrasonography of abdomen and pelvis was performed to rule out any pelvic pathology. Patients with irregular menstruation, any other pelvic pathology, structural deformity of the reproductive system and known cases of dysfunctional uterine bleeding were excluded. Patients having primary dysmenorrhoea was diagnosed on the 1st day of menstruation and medicine was given for the first 3 days of this diagnostic cycle. Administration of medicine had been continued for 7 days before menstruation till 3rd day of periods for the following three consecutive cycles. The patients were instructed to take *kashaya.* Changes in pain and associated symptoms were assessed on the fourth day of the menstruation in each three cycle during the study period and follow up period. Pain was assessed by visual analogue scale. Associated symptoms like low back ache and head ache were assessed by visual analogue scale and nausea, giddiness, vomiting by verbal descriptive assessment. Data obtained was analysed statistically. The study drug *Erandadi kashaya* had shown effect in controlling lower abdominal pain and associated symptoms like low back ache, nausea, vomiting and giddiness. On conclusion the study revealed that the research drug *Erandadi kashaya* is effective in treating primary dysmenorrhoea.

INTRODUCTION

The word dysmenorrhoea has a Greek origin, means difficult monthly flow and is now taken to mean painful menstruation. The prevalence of dysmenorrhoea worldwide ranges 15.8 - 89.5%.1Primary dysmenorrhoea is extremely common among adolescent, as many as 90% of adolescent females and above 50% menstruating women worldwide report suffering from it with 10-20% of them describing their hurt as severe as distressing.[2]

Dysmenorrhoea is a most common menstrual complaint which has a negative impact on women's quality of life, work productivity and health care utilization.3It is one of the main cause of absenteeism from school or work. As the most common cause of pelvic pain it results in activity restriction and thereby cause limitations on academic and sports activities. Despite the high prevalence, dysmenorrhoea is often poorly treated and even disregarded by many health professionals.

Conventional treatment of dysmenorrhoea includes non-pharmacological measures, pharmacological measures and surgical interventions. Many of these medical therapies like analgesics, antispasmodics, nonsteroidal anti-inflammatory drugs and anti-prostaglandins may have side effects. Hormonal and surgical interventions could imply negative effects on the reproductive capacity. In addition some dysmenorrhoeic women have contraindications to these treatments. In this scenario, further researches in the management of dysmenorrhoea is still demanding.

Among *vimshati yonirogas* described in Ayurveda classics *udavarta* is mentioned as a condition with painful and difficult menstruation, so it can be correlated to primary dysmenorrhoea. In this condition the *rajas* moves in reverse direction hence the term *udavartini*. Women feel immediate relief following discharge of menstrual blood. Normal menstrual flow is the function of *apana vata* therefore *apanavata dushti* can be considered as the responsible factor for *udavarta*.

Considering the high prevalence rate of dysmenorrhoea and the distress it creates in women *Erandadi kashaya* described in *Sahasrayogam* was selected for study. Present study was planned to find out a safe remedy with long lasting efficacy.

AIMS AND OBJECTIVES

To evaluate the effect of *Erandadi kashayain* Primary dysmenorrhoea

MATERIALS AND METHODS

30 patients were selected from the OPD and IPD of Govt. Ayurveda college Hospital for Women and Children, Poojappura,Thiruvananthapuram.

Drugs

Inclusion criteria

Females of age group 15-35 years with regular cycles and having primary dysmenorrhoea.

Exclusion criteria

i. Patient with irregular menstruation
ii. Patient with any other pelvic pathology
iii. Patient with dysfunctional uterine bleeding.
iv. Patients diagnosed with structural deformity of reproductive system.

Sample size

Sample size - 30

Study tool

i. Case proforma
ii. Pain assessment by visual analogue scale

Procedure

Patients having painful menstruation attending the OPD&IPD of Govt. Ayurveda college Hospital for women and children, Poojappura, Thiruvananthapuram were admitted to the study as per inclusion and exclusion criteria. Their primary data was collected through clinical case proforma. Ultrasonography of abdomen and pelvis had performed to

rule out any pelvic pathology and patients having primarydysmenorrhoea were selected for study. Study was conducted in a single group. The clinical symptoms of patients were recorded before starting the treatment. An informed consent was taken from the patient prior to the study. The ingredients of *Erandadi kashaya* was purchased, among which *chitraka* was purified by *churnodaka nimajjana*. The ingredients of kashayalike eranda, shigru, chitraka, punarnava were coarsely powdered. These four ingredients along with lasuna were taken in equal proportion (9.6gm each) and made into packets of 48gm. The patient was instructed to prepare kashayaby boiling packet of kashayachurna and crushed lasunain 16 times of water (768ml) and is reduced to 1/8th (96ml). It was taken in divided dose (48ml) twice daily 30 minutes before food along with erandatailam(12ml) in divided dose (6ml). Patients were given these packets of drugs and 1bottle (120ml) of eranda tailam in each month along with a written advice. Changes in pain and associated symptoms were assessed on each visit.

Duration of drug administration

Patients having history of dysmenorrhoea were admitted to the study. Their primary data was collected through clinical case proforma and ultrasonography of abdomen and pelvis will be performed to rule out any pelvic pathology. Patients having primary dysmenorrhoea had diagnosed on the 1st day of menstruation and medicine was given for the first 3 days of this diagnostic cycle. Administration of medicine had been continued for 7 days before menstruation till 3rd day of periods for the following three consecutive cycles.

Follow up

Follow up was done in next three cycles without the administration of drug.

Study period

18 months

Assessment

Patients was advised to report on the fourth day of menstrual cycle. They were assessed on the fourth day of the menstruation in each three cycles during study period and follow up period.

Outcome variable

Pain –change in mean score value assessed by visual analogue scale Low back pain and head ache assessed by visual analogue scale. Nausea omiting, giddiness assessed by verbal descriptive assessment.

Statistical analysis

Descriptive statistics such as frequencies and percentages are calculated for categorical study variables in order to get basic idea about data distribution. Paired't' test is used if the data distribution is normal. Wilcoxan signed rank test is used if the distribution is not normal.

RESULTS

EFFECTIVENESS OF TREATMENT IN LOWER ABDOMINAL PAIN

Table: Percentage distribution on the severity of lower abdominal pain

Lower abdominal pain	BT		AT		AF	
	N	%	N	%	N	%
Nil	0	0	18	60	14	46.67
Mild	0	0	12	40	15	50
Moderate	5	16.67	0	0	1	3.33
Severe	25	83.33	0	0	0	0
Total	30	100	30	100	30	100

Before treatment 83.33 % cases presented with severe lower abdominal pain and 16.67% presented with moderate pain. After treatment 60 % cases got complete relief from lower abdominal pain 40 % cases were having mild pain, none were having moderate pain or severe pain. After follow up 46.67 % cases were in the category of complete relief from pain, 50% cases had persistence of mild pain and 3.33 % had moderate pain.

Table: Effectiveness of treatment in lower abdominal pain

	N	Lower abdominal pain						
		Mean	sd	Median	Min	Max	Q1	Q3
BT	30	7.9	1.6	8	4	10	7	10
AT	30	1.0	1.4	0	0	3	0	3
AF	30	1.5	1.6	2	0	6	0	3

The mean score of severity of lower abdominal pain reduced from 7.9 ± 1.6 to 1.0 ± 1.4 after treatment and further changes to 1.5±1.6 after follow up.

Figure: Effectiveness of treatment in lower abdominal pain

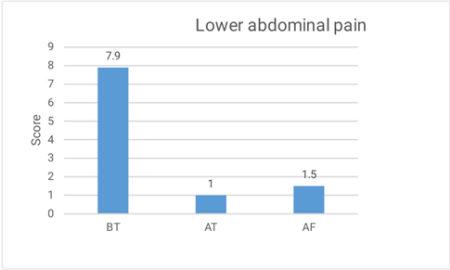

Table : Comparison of effectiveness of treatment in lower abdominal pain

	N	Lower abdominal pain		Multiple comparison	Paired difference		Paired t test	
		Mean	sd		Mean	Sd	T	P
BT	30	7.9	1.6	BT vs AT	6.87	1.74	21.656	<0.001
AT	30	1.0	1.4	AT vs AF	-0.50	1.48	-1.851	0.074
AF	30	1.5	1.6	BT vs AF	6.37	1.45	24.051	<0.001

Analysis shows that there is statistically significant change in lowerabdominal pain after treatment and after follow up period when they are compared to the pain scores before treatment (P value of BT Vs AT and P value of BT Vs AF are <.05).While comparing the reduction of pain after the treatment period and at the end of follow up period there is no significant change as P value is greater than 0.05.

DISCUSSION

Role of *sampraptighatakas* in manifestation of disease.

Vegadharana can be considered as the *vishesha nidana* for udavarta. Alongwith this intake of *vatakopakara vihara* leads to *vatakopa* especially apana vata. While analysing the *samprapti* of udavarta it has been found that all yonirogas epecially which are related to artavanishkramanakriya, are,caused, by apanavata vaigunya, as apanavata is the sthanikadosha with function of artavanishkramana. The derangement of kaphaoccurs as anubandhadoshadushti. Deranged apanavata causes sangaand vimargagamanain artavava hasrotases and sthanasamsraya in yonigar bhasaya. Due to vitiation of apanavata, akunjanaand prasaranadoes not takes place properly. This can be taken as the dysrrythmia of uterine muscles which will hinder the proper flow of menstrual blood leading to rajakrichrata. Besides this the main clinical feature of udavarta is pain caused by the vilomagati of vataand artava. Here vata vaigunya occurring either by margavarodha ie, anatomical or physiological

obstruction or doshavrita margatwam which results in sanga and vimargagamanaint he artavavahasrotas which in turn leads topainful menstruation or udavarta.

DISCUSSION ON MODE OF ACTION OF DRUGS

Srotoshodana, vayasthapana, rasayana, yoni-sukra vishodana, adhobhaga doshahara and apanavataanulomana are the karmas of eranda functioning for the correction of udavarta. Teekshnaand sukshmagunashelps to penetrate into minute channels.It is deepana so improves the agni.It alleviates vata and kaphadosha. Adhobhaga doshahara i.e, removes the doshas from adhakaya by anulomana. Pharmacologically erandahas anti analgesic, anti- inflammatory, and laxative effects.

Shigru is vatakaphahara, pittavardhaka and vedanahara. Roots of shigru also have anti- inflammatory property. It is analgesic, anti-stress and muscle relaxant in action. Almost every part of this tree has been found to exhibit analgesic activity. Dysrrhythmic uterine contractions can be addressed by the muscle relaxant property of M.olifera.

Lasuna is vedanasthapanaand vatahara, and it acts by its guru,pichilaand snigdhaguna. It alleviates the provoked vatakaphadosha.By its katuand teekshna gunait is kaphashamaka,and by its snighda, pichila, guruand ushna, guna, it is vata shamaka. Due to its ushnaguna it increases rakta and pitta. Balyam, agnideepana, rasayana, kaphanissaraka, raktotklesha, shothahara, vedanasthapana, anulomana are the karmasof lasuna relevant for the samprapti vighatana of udavarta. It inhibit synthesize of prostaglandins and thereby showing anti- inflammatory action. By its teekshnaguna it acts as srothoshodaka, thus removes block and improves blood circulation. Its ushna, teekshnaqualities dilate the blood vessels hence it is used in udavartaas a menstrual stimulator.

Chitraka vata-kaphahara, pitta vardhaka,shulahara, deepana, pachana, anahaghna, gulmaghna and sothahara in action. It mediates the proper flow of menstrual blood. Chitraka also have muscle relaxant properties. Punarnava is also called sothagni implies its action in alleviating inflammation.It is shoolanut, panduharam with ushna veerya and kapahavatahara property. Retenoids from Borrhoevia diffusa are anti- inflammatory agents. Punarnava possess antispasmodic effect so it controls the increased uterine contractions and thereby reducing the pain. Punarnava found to be a source of calcium channel blocker.

Artava is agneya in character and the drugs to be used in various forms should be agneya in nature, as it will increase with the drugs of identical qualities. Eranda,shigru,lasuna, chitraka, punarnava, are, ushnaveerya, drugs.

Margavarodha is the cause of vatakopain this disease. The vatakaphahara property of drugs relieves the margavarodha. Vatanulomamana, mriduvirechana and garbhasaya sodhana property of the drugs together relieves pain and associated symptoms. All the drugs arevatakaphasamana and ushnaveeryain nature. Erandathaila is also ushna veerya, kaphavata hara and have anulomana and srotovishodhana properties. So for the samprapti vighatana of udavarta yonivyapat these propertiesof the drugs play major role as margaavarodhaand vilomagatiof vayuare the main events in the pathogenesis.

Based on the result of this study, it has been found that the study drug Erandadi kashaya is effective in reducing lower abdominal pain and associated symptoms of primary dysmenorrhoea without any side effects.

CONCLUSION

It can be concluded that the study drug Erandadi kashaya is effective in treating Primary dysmenorrhoea without causing any side effects.

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